

| SIO Shipyard Representative Bi-Weekly Progress Report | | |
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| Project: AGOR 28 | Contract No.: N00014-12-C-0305 | Shipyard: Dakota Creek Industries |
| Prepared by: Paul D. Bueren Scripps Institution of Oceanography (SIO) 297 Rosecrans St. San Diego, CA 98106 | Date: October 23, 2014 | Program Officer: Robert (Tim) Schnoor Office of Naval Research 875 Randolph St ONR 321 Arlington, VA 22203-1995 |
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1. Meetings:

- i. Participated in weekly conference calls.

2. The following Shipyard Question Submittals were reviewed and commented on:

No questions this reporting period.

3. Logistics:

- i. Continuing to review Vendor Recommended Spares (VRS).
- ii. Continuing to review Technical Manuals and Supplemental Information.
- iii. Continuing to work on initial outfitting lists for Sally Ride.
- iv. Working on NS5 Hierarchy

4. Operator Concerns:

- Dodge Shaft Bearings –
For the Starboard shaft, the temperature on the Dodge babbit bearing had too great a temperature rise, >130 degrees. I believe it was 138 at the fwd end and 70 on the aft. The manual indicates 130-degree max temp. The heating was very uneven with the fwd half getting much hotter. This was with no pitch and rpm up to 175. I believe they stopped the shaft before going to 200-rpm. I was on the dock observing when they shut down.

For the Port Shaft, the temperatures remained below 100-degrees all the way up to 200-rpm. The shaft was kept at 200-rpm with no pitch for over 10-minutes while the bearing temps were observed. Towards the end to the run, the temperature shot up to over 130-degrees very rapidly and the shaft was stopped.

J1 requires self-aligning bearings, which the Dodge is not. The yard is making some adjustments to the bearing alignment in an effort to correct the heating issue. I have my doubts that this will do anything other than re-enforce the need for a different bearing at this location. One that is self-aligning and rated for the load. My understanding is that very early in the project, the babbit bearing was chosen over a roller type bearing to reduce noise. This seems odd, as the pitch control unit has roller bearings at each end.

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Starboard Dodge Bearing



- Main Deck Ventilation Closures – ABS is requiring closures on all of the ventilation louvers located on the main deck in order to meet Load Line requirements for flooding. GPA is asking for a waiver to use removable covers that would be stored until needed as there is no space for permanently installed hinged covers.

Port Side Louvers – Sally Ride



Starboard Side Louvers - Armstrong



Scott Tuttle suggested mounting the covers with removable standoffs, so that the covers would be stored in place with enough of a gap to allow for the necessary air flow.

- Side & CTD Handling Systems – Need verification that both Handling Systems meet the specification. Additional testing required once they are operational.
- AGOR acoustic insulation, Tuff-Mass by Soundown, appears to be an unapproved MLV. A ship check of Sally Ride indicates that the yard has stopped insulation work in areas where this product is/was to be used.

Sally Ride Aux Machinery Overhead



5. Sally Ride Progress:

- Overall progress remains slow. At this time Ride is between 7-9 months behind Armstrong.
- Electrical – Electricians continuing to pull cable but very little or no terminations are being made. The present crew is primarily laying the cable in the trays and prepping it for hook up by others. No terminations have been made between the generators, motors, drives and switchboards. The pictures below indicate that we continue to lose ground.

Armstrong 9 September 2013 Generator Termination start



Armstrong 13 Sept 2013



Ride 3 September 2014 No2 Generator



Sally Ride 23 October 2014 No2 Generator



- HVAC – The pace is increasing but still far behind schedule.

Armstrong Focsle Deck HVAC Room 4 November 2013

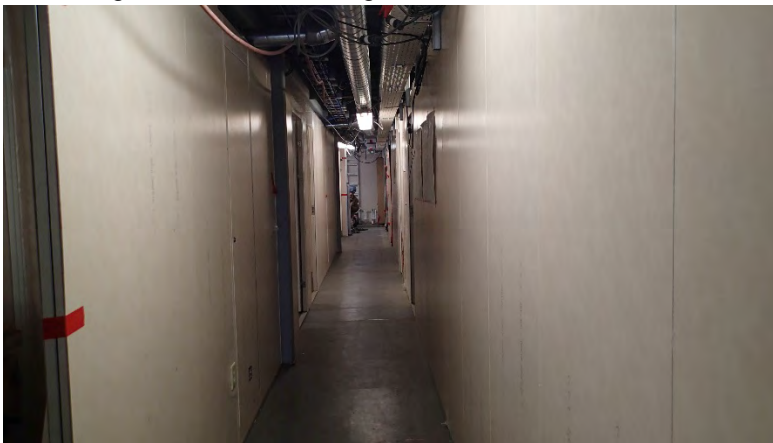


Ride Focsle Deck HVAC Room 23 October 2013



- Foc'sle Deck – More bodies are installing joiner work, hvac and wiring. Area is still behind when compared to Armstrong.

Armstrong Focsle Deck Passage 17 October 2013



Ride Focsle Deck Passage 23 October 2014



6. Call-outs:

Inspected various foundation with ABS in attendance. No issues to report.

541-002-2 Pressure testing of the fuel oil transfer system (USCG & ABS witness)

524-001-2 Hydrostatic of the seawater cooling system

524-002-2 Hydrostatic and unobstructed flow of the uncontaminated seawater system

524-004-2 Hydrostatic and unobstructed flow of the deck incubator seawater system

7. The following DRL's were reviewed and commented on:

| 1st App Hull No | DRL No | Document Title | Occur No/Rev No |
|--------------------|-----------|--|-----------------------|
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (#509 DI-055 (TM) for 505 Apollo 62-100 Series SS Ball-Cone In Line Check Valve)(R/ASR) | 1017/0 |
| AGOR27 | A031-04 | STD Report - TEST REPORT (529-003-3 Ballast System Operational & Unobstructed Flow Test)(R/ASR) | 74/0 |
| AGOR27 | A035-19 | STD Report - SSV FACTORY ACCEPTANCE TEST (FAT) NOTIFICATION (Allied TK4-30 Portable Crane FAT Notification)(R/ASR) | 53/0 |
| AGOR27 | A051 | STD Report - VENDOR RECOMMENDED SPARES (VRS) LISTINGS, STATISTICS, AND LOCATIONS (DI-051 72011-03 Thordon Bearings Water Quality Package (WQP) with Flowm)(R/ASR) | 1288/0 |

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| AGOR27 | A051 | STD Report - VENDOR RECOMMENDED SPARES (VRS) LISTINGS, STATISTICS, AND LOCATIONS (PL 720446-01 NR AMV Marine Fire Damper)(R/ASR) | 1290/0 |
| AGOR27 | A051 | STD Report - VENDOR RECOMMENDED SPARES (VRS) LISTINGS, STATISTICS, AND LOCATIONS (PL 720798-01 NR T&S Brass Faucet)(R/ASR) | 1292/0 |
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (#510 DI-055 (TM) for 665a Bronswerk Scientific Refrigeration Freezer Spaces)(R/ASR) | 1023/0 |
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (#512 DI-055 (TM) for 665c T&S Brass and Bronze Works Moel B-1141-04 Faucet)(R/ASR) | 1025/0 |
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (#513 DI-055 (TM) for 512 AMV MD-411-1 Marine Fire Damper)(R/ASR) | 1027/0 |
| AGOR27 | A002 | STD Report - DESIGN REVIEW AGENDAS AND MINUTES (DR #17 Presentation & Agenda)(R/ASR) | 103/0 |
| AGOR27 | A005 | STD Report - SINGLE SYSTEM VENDOR (SSV) DESIGN REVIEW AGENDAS AND MINUTES (NCE - DR #17 Presentation)(R/ASR) | 51/0 |
| AGOR27 | A024 | STD Report - REGULATORY BODY CORRESPONDENCE (USCG/GPA - Alarm Group)(R/ASR) | 143/1 |
| AGOR27 | A051 | STD Report - VENDOR RECOMMENDED SPARES (VRS) LISTINGS, STATISTICS, AND LOCATIONS (DI-051 72011-03 Thordon Bearings Water Quality Package (WQP) with Flowm)(DARC REV) | 1289/0 |
| AGOR27 | A052 | STD Report - CONFIGURATION DATABASE LISTING (CDBL) (DI-052 (CDBL) Monthly Submittal #31)(R/ASR) | 80/1 |
| AGOR27 | A052 | STD Report - CONFIGURATION DATABASE LISTING (CDBL) (DI-052 (CDBL) Monthly Submittal #32)(R/ASR) | 82/0 |
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (#511 244 Thordon Bearings Water Quality Package (WQP) with Flowmeter)(R/ASR) | 1021/0 |
| AGOR27 | A055 | TM Report - COMMERCIAL TECHNICAL MANUALS AND SUPPLEMENTAL DATA (DI-055 TM - Todd Enterprises PN 85-1666WH 20-Gallon Holding Tank)(R/ASR) | 1029/0 |
| AGOR27 | A059 | STD Report - STUDENT GUIDES (#14 DI-059 (Student Guide) for Sound Propeller & Mathews Marine Systems)(R/ASR) | 25/0 |
| AGOR27 | A024 | STD Report - REGULATORY BODY CORRESPONDENCE (GPA/ABS - Ventilation Closures)(R/ASR) | 145/0 |
| AGOR27 | A031-03 | STD Report - TEST PROCEDURES (243-002-3 Propulsion Shaft Locking Device)(R/ASR) | 171/0 |
| AGOR27 | A002 | STD Report - DESIGN REVIEW AGENDAS AND MINUTES (DR #17 GPA Presentation & Agenda)(R/ASR) | 105/0 |
| AGOR27 | A024 | STD Report - REGULATORY BODY CORRESPONDENCE (USCG/GPA - Alarm Group)(R/ASR) | 143/0 |
| AGOR27 | A031-03 | STD Report - TEST PROCEDURES (235-001-4 Main Propulsion Motors, Thrusters, and Drives)(R/ASR) | 137/1 |
| AGOR27 | A031-03 | STD Report - TEST PROCEDURES (555-001-3 Fixed Fire Extinguishing Water Mist Plant Operational Test)(DARC REV) | 166/0 |
| AGOR27 | A031-03 | STD Report - TEST PROCEDURES (551-001-3 SSAC's Operation, Blowdown and Distribution Test)(R/ASR) | 169/0 |

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| AGOR27 | A031-04 | STD Report - TEST REPORT (310-002-3 Emergency Diesel Generator Switchboard Test)(R/ASR) | 68/0 |
| AGOR27 | A031-04 | STD Report - TEST REPORT (524-002-2 Hydrostatic&Unobstructed Flow of Uncontaminated SW Syst.)(R/ASR) | 70/0 |
| AGOR27 | A031-04 | STD Report - TEST REPORT (524-004-2 Hydrostatic & Unobstructed Flow for Deck Incubator SW Syst.)(R/ASR) | 72/0 |